



UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office

Address : COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

SERIAL NUMBER	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
077349,669	05/10/89	JOHNSON	PC940548

MERVIN E. BROKKE  
USDA-ARS-NORTHERN REGIONAL RES. CTR.,  
1815 NORTH UNIVERSITY STREET  
PEORIA, IL 61604

EXAMINER

WITZ, J

188

03/28/90

☒ This application has been examined ☐ Responsive to communication filed on \_\_\_\_\_ ☐ This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), no days from the date of this letter.  
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

- |   |  |
|---|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited by Examiner, PTO-892. | 2. <input type="checkbox"/> Notice re Patent Drawing, PTO-948.                   |
| 3. <input checked="" type="checkbox"/> Notice of Art Cited by Applicant, PTO-1449.      | 4. <input type="checkbox"/> Notice of Informal Patent Application, Form PTO-152. |
| 5. <input type="checkbox"/> Information on How to Effect Drawing Changes, PTO-1474.     | 6. <input type="checkbox"/> _____  |

Part II SUMMARY OF ACTION

1. ☒ Claims 1-6 are pending in the application.

Of the above, claims \_\_\_\_\_ are withdrawn from consideration.

2. ☐ Claims \_\_\_\_\_ have been cancelled.

3. ☐ Claims \_\_\_\_\_ are allowed.

4. ☒ Claims 1-6 are rejected.

5. ☐ Claims \_\_\_\_\_ are objected to.

6. ☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

7. ☐ This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.

8. ☐ Formal drawings are required in response to this Office action.

9. ☐ The corrected or substitute drawings have been received on \_\_\_\_\_. Under 37 C.F.R. 1.84 these drawings are ☐ acceptable, ☐ not acceptable (see explanation or Notice re Patent Drawing, PTO-948).

10. ☐ The proposed additional or substitute sheet(s) of drawings, filed on \_\_\_\_\_ has (have) been ☐ approved by the examiner, ☐ disapproved by the examiner (see explanation).

11. ☐ The proposed drawing correction, filed on \_\_\_\_\_, has been ☐ approved, ☐ disapproved (see explanation).

12. ☐ Acknowledgment is made of the claim for priority under U.S.C. 119. The certified copy has ☐ been received ☐ not been received  
☐ been filed in parent application, serial no. \_\_\_\_\_; filed on \_\_\_\_\_

13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.

14. ☐ Other

EXAMINER'S ACTION

The following is a quotation of 35 U.S.C. 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) and (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

Claims 1-6 are rejected under 35 U.S.C. 103 as being unpatentable over GB'12 combined with Johnson et al. (AT) all taken in view of Lang.

GB'12 describes a method of sorting living spermatozoa by collecting the sperm from a mammal, staining the sperm with a fluorescent dye, specifically Hoechst 33342, diluting the sperm with a sheath fluid, passing the sperm through a detecting means and a cell sorting means which sorts the sperm as desired. Claim 4 and the last paragraph of the specification state that this sorting may occur to separate X-bearing sperm from Y-bearing sperm. Johnson et al. describes the sorting of stained sperm heads into X-bearing and Y-bearing sperm using a cell sorter. Lang discloses that it is conventional to use sorted sperm to alter sex ratios in desired mammals. GB'12 discloses this method for use with sperm from bovids, equids, caprids, lagomorphs, ovids or hominids. Johnson et al. disclose the use of their method with boar sperm. It would have been obvious to one of ordinary skill in the art to stain sperm with a known fluorescent DNA stain, such as H 33342, to sort said stained sperm based upon detection of the differing amount of fluorescence indicative of the differing amounts of DNA in X-bearing versus Y-bearing sperm, and finally to use said sorted sperm to

Serial No. 349669

-3-

Art Unit 188

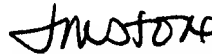
influence sex ratios via artificial insemination. The use of phosphate buffered saline with 0.1% albumin as the sheath fluid and modified egg yolk extender as the collecting fluid is considered to be conventional in the art.

The Group and/or Art Unit location of your application in the PTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Group Art Unit 188.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Jean C. Witz whose telephone number is (703) 557-3433. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 557-0664.



3/22/90

  
JACQUELINE STONE  
PRIMARY EXAMINER  
ART UNIT 188